DELIVER VALUE

in the

DATA ECONOMY

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THE #1 BOOK YOU NEED TO READ

Deliver Value in the Data Economy

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Preface

Based on data product-related discussions with 200+ companies, we have seen that the gap in knowledge is not in technology or adopting technology to monetize data assets. A lot of tools, platforms, and technical solutions exist and we have skilled people on the job. But the problem is that they do not know what to do or why. The business layer in companies is lagging behind and has difficulties understanding and applying data economy in their business. We want to change that!

Deliver Value in the Data Economy book is written for business developers, CEOs, CIOs, CDOs, and all developing data-driven businesses. If you happen to be in a position in which innovating new business or leading digitalization is your thing, this book is for you!

The book was written by three experienced Platform, API and

Data Economy professionals because such a book is needed by many. Our backgrounds are introduced in the Meet the Authors chapter. We've done a lot of consulting and the same concepts, questions, concerns, etc. are repeatedly coming up. We thought that it might be handy to put all the repeating things in a book and share that.

The book offers insights based on our experiences in practical cases as well as results from academic research we conducted as well. Two of us have doctoral degrees from ecosystem driven platform business. We will leave the technical aspects in the outer rings since those aspects are already covered in various blogs and podcasts. The focus is on the business side of data commodities, known usually as data products and data as a service (DaaS).

We wrote a blog series called *100 Days of Data Economy*[1] before authoring this book. We used that series as an exercise to clarify our thoughts before putting it all in a package. Enjoy reading the book and feel free to connect with us!

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[1]https://www.dataproductbusiness.com/100days

Chapter 1

Introduction

Data could unlock your future success

Data is the most valuable asset in growth-oriented companies. Data is like any other commodity and requires refining to gain more value in the eyes and processes of customers. The Data Economy is on the rise. A conservative estimate of the market size for data in the global hospitality industry alone was US $43.2 Billion in 2018, and it has been doubling in size every three years. According to DataLandscape in the EU the estimated size of the Data Market was 60 Billion euros in 2016.

Data-driven digitalization is proven to be profitable since ac-

cording to a survey conducted by McKinsey Global Institute 2013 data-driven organizations are over 20 times more likely to acquire customers, half a dozen times as likely to retain their customers, and 19 times as likely to be profitable[8].

The importance of data has increased lately as technology has enabled us to collect more and more data about events and objects in our daily life. Big data has been in the front-line discussions for some years. According to Cavanillas et al. data has become a new factor of production, in the same way as hard assets and human capital[15]. It has been estimated that big data can increase productivity and efficiency resulting in up to 60 % increase in retailers' operating margins[41]. OECD has estimated that efficient use of big data could reduce the costs of administrative activities by 15–20 % in the public sector in Europe[48].

Digital transformation leads to major changes in established value creation structures and traditional business models of companies [75, 71]. Data are increasingly used beyond the improvement of internal processes by serving as a strategic resource for the development of data-driven innovations and business models [76, 79]. This data-driven innovation and creation of economic value is less and less created by a single organization or in traditional value chains but instead takes place in cross-industry, socio-technical networks – so-called data ecosystems [35, 49, 75].

Data is no longer a side show

At the same time as this data governance renaissance, data is increasingly becoming an article of trade or commerce - in short, a product [26] or as we know in services world, a service. The era of data economy is about the process of refining data or commoditization. Data is becoming an independently valuable asset that is freely available and interchangeable on the market[31, 74, 43].

A "commodity" is defined as something useful that can be turned to commercial or other advantage. Some well known examples of traditional commodities are grains, gold, beef, oil and natural gas. In brief, a commodity is a basic good used in commerce that is interchangeable with other commodities of the same type and are often used as inputs in the production of other goods or services.

Open data is the strong manifestation of this new era. The government mandates and open data policies from multiple countries and public entities continue to contribute to the process of data commoditization. Openness has the benefit of increasing the size of the market. The greater the size of the market and the demand for a resource, the greater the competitive pressure on price and, hence, the increase in commoditization of the resource.

Yet the data economy as business is still a relatively new

thing and we are still taking baby steps at the global level. Keep in mind that the success story of APIs took about a decade or even longer depending of your point of view.

Platforms and APIs

The emerging API Economy has become a concrete opportunity to go beyond the traditional development of vertical ICT solutions [9]. Building on open APIs and service oriented computing [65], the API economy creates new business value by enabling innovative collaboration between stakeholders. Such stakeholders include companies, public authorities and research institutes, seeking for the numerous advantages – for instance, according to Benzell et al, API adoption increases firms' market value by 10.3% [7].

From the technical perspective, APIs are used to provide abstracted access to massive data and services to external developers through Open APIs [78]. These Open APIs[1] can be free for anyone to consume, or associated with a monetary plan or other provisioning mechanisms. Hence, they are at the core of novel business activities that have emerged with the increasing use of the Web as an application platform, at least potentially.

New paradigms, such as serverless computing [42] and web mashups [32], are inspiring designs that are fundamentally

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[1]Open API is classification which contains Public APIs and Partner APIs.

API centered. Hence, the APIs become a key part of virtually all application development. The API Economy, where numerous APIs for various purposes are provided by ecosystem participants [65], has already changed the application development by offering Open APIs and even integrated open source implementations.

The number of available APIs has been growing steadily in recent years. For example, just in the world's biggest API catalogue Programmable Web, the amount of available APIs is over 24 000[2]. The repositories of APIs list only the Open Data Interfaces and Public APIs, which represent only a fraction of APIs – there are partner and private APIs, which are not listed in the catalogues.

The Data Economy will not become big over one or two nights. The evolution of the data economy might follow the path laid out by the API Economy described above. The big question is what is stopping us from making the data economy big just now? It's easy to say what is not the problem first and then tackle the more difficult issues.

But why will you probably fail?

The above clearly indicates rational reasons to take economic advantage from data in one form or another. Still too few

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[2]https://www.programmableweb.com/ read Jan. 27, 2022

companies succeed in entering the data economy. Why is that?

Amount of data is not the problem

Having data seems not to be the problem since before 2010 it was estimated that we humans generate twice as much data in two days as we did from the dawn of man through 2003. In addition to that, IoT driven machine generated data is increasing all the time. According to IBM, 90 percent of the data in the world today was created during the last two years alone[37]. The data growth is most likely not decreasing as new devices, sensors and technologies emerge.

Accessing the data is not the problem either

The biggest problem is not in accessing the data either. The emerging API Economy has become a concrete opportunity to go beyond the traditional development of vertical ICT solutions [9]. Building on open APIs and service oriented computing [65], the API economy creates new business value by enabling innovative collaboration between stakeholders.

From the technical perspective, APIs are used to provide abstracted access to massive data and services to external developers through Open APIs [78]. Despite of the technical opportunities APIs are not too often treated as products but as integration solutions. This results in raised risks and low quality developer experience on the API consumer side. The

result is that data is available but the mechanism to access it is not trusted or is difficult to use.

In brief, we can sum up that data is gathered more and more easily and automatically, we have efficient data management solutions and technical solutions to enable access to data. For the data economy to emerge, it has to be monetized and commercialized.

The problem is in creating business around the data

Just like with APIs, the data economy has started from the activities of technical people paired with a bunch of data modelling ontology professionals. The business people have not been involved. One of the reasons is that the first way to take advantage of the data has been to improve the efficiency of processes. These exercises have been very technical in nature. The more wider advantage of data requires that business people are involved and take the lead. We should move forward to data monetization and commercialization.

In the academic literature, three terms are used to describe the data economy more profoundly: data commercialization, data monetization and data reuse. According to Thomas and Leiponen, in data commercialization, data itself is monetized as an asset, rather than analyzed, and the resulting insights combined with existing or new products and services[66].

Data monetization has been used as an umbrella term to define all actions which aim to generate revenue with or through data or data-derived products or services. Data reuse discusses the topic from a more technical point of view and focuses on the secondary use of the gathered data.[30]

If the above are the problems, then what should be done? To be able to succeed in the data economy, one must understand the world we live it, the new business logics that apply (for example, the subscription economy). Another fundamental is that data is no longer just data, it has become the center piece of value chains. Data has to be refined and treated like a valuable commodity. Above all, data-driven value creation must be lead by business decision-makers with the appropriate skills, not the technical people.

The solution is to approach data with a product mindset

Given the nature of data ecosystems requiring border crossing activities in value creation, data used in the process must be packaged into products and services for more efficient reuse and sales. Jedd et al state in Harvard Business Review that data should be approached with a product mindset [21]. Note that a product mindset is not the same as considering data only as products, as service dominant logic is taking over the data as well. We are still living in the strong

data product phase, but data as a service is already lurking around the corner. Thus when we say approach data with a product mindset, we see it as more holistic and abstract way to include data-driven services as well.

Data as a Product was one step towards servitized data. Open data started the tsunami of data and after the hype, data monetization and commercialization have raised the often discussed topics also in the academic research [45, 31, 39]. Yet the focus has been mostly on big data and technical aspects of the data. Emerging data economy markets are not fully yet here yet. Instead we are still in the phase of learning to utilize and monetize data - both require data value streams which are expected to follow the service-dominant paradigm more than goods-dominant paradigm.

The solution is a value delivery framework

Single data products and services are a great start and that is how commodity portfolios are developed. However, that is not enough. The products and services are part of your data economy strategy and tightly connected to data literacy skills, organization structure, business intelligence and technical solutions enabling data flows. That "machine" at best is your value delivery machine and must be managed with a clear model. That is what we offer to you at the end of this book. We call the model "*Data Value Delivery Frame-*

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AUTHORS OF THE BOOK HAVE TONS OF EXPERIENCE FROM LEADING SUCCESSFUL PLATFORM, API AND DATA ECONOMY SERVICES AND BUSINESSES.

LET'S CONNECT

DATA PRODUCT BUSINESS